

WHAT IS CLAIMED IS:

1. An electronic watermark system for use in inserting an electronic watermark into a digital image, comprising:

measuring means for measuring a data amount of the digital image per unit time to produce a detection signal representative of a result of measurement; and

control means for controlling a degree of insertion strength of the electronic watermark with reference to the data amount of the digital image per unit time.

2. An electronic watermark system as claimed in claim 1, wherein the control means comprises:

a judging portion for judging the data amount of the digital image to produce a judgement result signal;

the electronic watermark system further comprising an insertion portion for inserting the electronic watermark by adjusting the degree of insertion strength of the electronic watermark in response to the judgement result signal.

3. An electronic watermark system as claimed in claim 2, further comprising:

a preprocessing portion which is supplied as the digital image with a sequence of DCT coefficients;

the judging portion judging the data amount from the number of the DCT coefficients.

4. An electronic watermark system as claimed in claim 2, further comprising:

a preprocessing portion which is supplied as the digital image with a sequence of bits from a preprocessing portion;

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the judging portion judging the data amount from a bit rate of the bit sequence.

5. An electronic watermark system as claimed in claim 1, wherein the digital image is a sequence of encoded data encoded in accordance with the MPEG coding.

6. A method of inserting an electronic watermark into a digital image, comprising the steps of:

measuring a data amount of the digital image per unit time to produce a measurement result signal representative of a measurement result; and

controlling a degree of insertion strength of the electronic watermark in response to the measurement result signal to insert, into the digital image, the electronic watermark adjusted by the degree of insertion strength.

7. A method as claimed in claim 6, wherein the controlling step comprises the steps of:

judging the data amount of the digital image with reference to the measurement result signal;

adjusting the degree of insertion strength of the electronic watermark to produce an adjusted watermark; and

inserting the adjusted watermark into the digital image.

8. A method as claimed in claim 7, wherein the judging step judges the data amount of the digital image with reference to the number of DCT coefficients generated by a preprocessing portion.

9. A method as claimed in claim 7, wherein the judging step judges the data amount of the digital image with reference to a bit rate of a bit sequence generated by a preprocessing portion.

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10. A method as claimed in claim 7, wherein the digital image is a sequence of encoded data coded by the MPEG CODING.

11. A method of inserting an electronic watermark into a digital image, comprising the steps of:

detecting a data amount of the digital image per unit time; and

adjusting a degree of insertion strength of the electronic watermark on the basis of the data amount detected.

12. A method as claimed in claim 11, further comprising the step of:

preprocessing the digital image into a stream of DCT coefficients.

13. A method as claimed in claim 12, wherein the detecting step comprises the steps of:

measuring the data amount per unit time from the DCT coefficient stream; and

controlling the degree of insertion strength with reference to the measured data amount per unit time.

14. A method as claimed in claim 11, wherein the detecting step comprises the steps of:

measuring a bit rate of the digital image to obtain the data amount of per unit time; and

controlling the degree of insertion strength with reference to the measured bit rate.

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